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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/758,328	01/14/2004	Teruo Nagasawa	16869P-010210US	6412
20350	7590	05/19/2004	EXAMINER	
TOWNSEND AND TOWNSEND AND CREW, LLP TWO EMBARCADERO CENTER EIGHTH FLOOR SAN FRANCISCO, CA 94111-3834			ELMORE, STEPHEN C	
			ART UNIT	PAPER NUMBER
			2186	

DATE MAILED: 05/19/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/758,328	NAGASAWA ET AL.	
	Examiner	Art Unit	
	Stephen Elmore	2186	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 14 January 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 25-48 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 25-29, 31, 32, 34, 35 and 37-41 is/are allowed.
- 6) ☒ Claim(s) 42-48 is/are rejected.
- 7) ☒ Claim(s) 30, 33 and 36 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 14 January 2004 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☒ Certified copies of the priority documents have been received in Application No. 09/616,829.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

Art Unit: 2186

DETAILED ACTION

1. Claims 1-24 were canceled and claims 25-48 were added by the preliminary amendment filed January 14, 2004.
2. Claims 25-48 are presented for examination.

Priority

3. Applicant's request for priority based upon this application being a continuation of U.S. Patent Application No. 09/616,829, filed July 14, 2000 (now US Patent 6,684,306), which claims priority from Japanese Patent Application Reference No. 11- 356970, filed December 16, 1999, is acknowledged and granted.

However, in connection with such claim for priority it is brought to applicant's attention that the following typographic error was discovered in the paper titled "Utility Patent Application Transmittal" filed January 14, 2004, wherein the paper inadvertently misidentifies the parent US application as "09/616,029."

Drawings

4. The drawings are objected to because:
 - a. in Fig. 2A, labels "CHA" and "DKA" are not mentioned in the specification.

A proposed drawing correction or corrected drawings are required in reply to the Office action to avoid abandonment of the application. The objection to the drawings will not be held in abeyance.

Specification

5. The disclosure is objected to because of the following informalities:

Art Unit: 2186

- a. The current status of parent application 09/616,829, i.e., now US Patent 6,684,306, should be updated in the first sentence of the specification;
 - b. The title of the invention is not descriptive. A new title is required that is clearly indicative of the invention to which the claims are directed. The title is imprecise; it does not reflect any novel feature or characteristic of the claimed invention;
 - c. specification, general, labels "CHA" and "DKA" which appear in the drawings are not mentioned in the specification;
 - d. specification, page 5, line 16, the scope of "the relevant information" is not disclosed;
 - e. specification, page 6, lines 10-16, the terminology "an order" is not clear because it is uncertain what kind of order or functionality is being referred-to;
 - f. specification, page 7, line 29, and at other locations, "lightening" is misspelled;
 - g. specification, page 9, lines 9-33, drawing reference character "220" simultaneously refers to two different, diverse kinds of elements: "disk controller" and "stand alone storage system (line 29)";
 - h. specification, page 14, line 31, the terminology "recognition timing" is not clear because it is uncertain what kind of recognition or timing functionality is being described.
- Appropriate correction is required.

Claim Objections

6. Claims 30, 33 and 36 are objected to because of the following informalities:
 - a. claim 30, line 7, in the language

Art Unit: 2186

"wherein when one of said first data storage apparatus and (emphasis added) said third data storage apparatus detects"

the use of "one of" implies a choice between alternatives, therefore, the alternative term "or" should be used to link the two alternative choices -- the use of "and" is non-idiomatic English;

b. claim 33, line 10, the term "*anode*" appears to be an inadvertent typographic error for the apparently correct term "node";

c. claim 36, lines 2-3, the phrase "*when said controller detects a trouble or a trouble sign of a supply voltage*" is non-idiomatic English.

Appropriate correction is required.

Double Patenting

The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. See *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and, *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent is shown to be commonly owned with this application. See 37 CFR 1.130(b).

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

7. Claims 42-48 are rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1, 3, 5, 6, 7, 10, and 12 of U.S. Patent No.

Art Unit: 2186

6,684,306, respectively. Although the conflicting claims are not identical, they are not patentably distinct from each other because:

Claims 1, 3, 5, 6, 7, 10 and 12 of US Patent No. 6,684,306 contain every element of claims 42-48, of the instant application, respectively, and as such anticipate(s) claims 1, 3, 5, 6, 7, 10 and 12 of the instant application.

"A latter patent claim is not patentably distinct from an earlier patent claim if the latter claim is obvious over, or anticipated by, the earlier claim. In re Longi, 759 F.2d at 896, 225 USPQ at 651 (affirming a holding of obvious-type double patenting because the claims at issue were obvious over claims in four prior art patents); In re Berg, 140 F.3d at 1437, 46 USPQ2d at 1233 (Fed. Cir. 1998) (affirming a holding of obvious-type double patenting where a patent application claim to a genus is anticipated by a patent claim to a species within that genus). ELI LILLY AND COMPANY v BARR LABORATORIES, INC., United States Court of Appeals for the Federal Circuit, ON PETITION FOR REHEARING EN BANC (DECIDED: May 30, 2001).

More specifically, the following claim differences are shown --

As to claim 42,

42. A data storage apparatus comprising:

at least one of a plurality of storage media;

a cache memory;

a controller configured to move data into and out of said at least one of a plurality of storage media and said cache memory; said controller further configured to receive data from an external source for storage; and

Art Unit: 2186

a [hazard] sensor configured to detect a probable occurrence of an [hazardous] event external of the data storage system; wherein

responsive to said [hazard] sensor detecting a probable occurrence of the [hazardous] event, said controller copies data from said cache memory to said at least one of a plurality of storage media.

and,

As to claim 43,

43. A data storage apparatus comprising:

at least one of a plurality of storage media;

a cache memory;

a controller operable to move data into and out of said at least one of a plurality of storage media and said cache memory; said controller further operable to receive data from an external source for storage; and

a [hazard] sensor; wherein

responsive to said [hazard] sensor detecting a probable occurrence of an [hazardous] event, said controller copies data from said cache memory to said at least one of a plurality of storage media, and said, controller receiving data from said external source delays sending an acknowledgment to said external source until said data is copied into said at least one of a plurality of storage media.

and,

As to claim 44,

44. A data storage apparatus comprising:

Art Unit: 2186

at least one of a plurality of storage media;

a cache memory;

a controller configured to move data into and out of said at least one of a plurality of storage media and said cache memory; said controller further configured to receive data from an external source for storage; and

a [hazard] sensor; wherein

responsive to said [hazard] sensor detecting a probable occurrence of an [hazardous] event, said controller copies data from said cache memory to said at least one of a plurality of storage media, and said controller receiving data from said external source for storage is temporarily suspended while said controller copying said data from said cache memory to said at least one of a plurality of storage media is performed.

and,

As to claim 45,

45. A data storage apparatus comprising:

at least one of a plurality of storage media;

a cache memory;

a controller configured to move data into and out of said at least one of a plurality of storage media and said cache memory; said controller further configured to receive data from an external source for storage; and

a [hazard] sensor; wherein

responsive to said [hazardous] sensor detecting a probable occurrence of an [hazardous] event, said controller copies data from said cache memory to said at least one

Art Unit: 2186

of a plurality of storage media, and said controller copying said data from said cache memory to said at least one of a plurality of storage media is performed with a higher priority than said controller receiving data from said external source for storage.

and,

As to claim 46,

46. A data storage apparatus comprising:

at least one of a plurality of storage media;

a cache memory;

a controller configured to move data into and out of said at least one of a plurality of storage media and said cache memory; said controller further configured to receive data from an external source for storage; and

a [hazard] sensor; and

a link to a remotable storage system; wherein

responsive to said sensor detecting a probable occurrence of an [hazardous] event, said controller copies data from said cache memory to said at least one of a plurality of storage media, and wherein said controller copying data from said cache memory further comprises said controller copying said data over said link to said remotable storage system.

and,

As to claim 47,

47. A data storage apparatus comprising:

at least one of a plurality of storage media;

Art Unit: 2186

a cache memory;

a controller configured to move data into and out of said at least one of a plurality of storage media and said cache memory; said controller further configured to receive data from an external source for storage; and

a [hazard] sensor; and

a link to a removable storage system; wherein

responsive to said sensor detecting a probable occurrence of an [hazardous] event said controller copies data from said cache memory to said at least one of a plurality of storage media, and said controller copying data from said cache memory further comprises said controller copying said data over said link to said removable storage system; and

wherein said controller copying said data over said link to said removable storage system is performed asynchronously, until, responsive to said sensor detecting a probable occurrence of an [hazardous] event, said controller performs said copying of said data over said link to said removable storage system synchronously.

and,

As to claim 48,

48. A data storage system, comprising:

a first data storage system, said first data storage system further comprising:

a storage device that stores data received from a computer; and

a storage controller, said storage controller comprising:

a memory to hold said data temporarily, and

Art Unit: 2186

a recognition part to recognize a possibility of an event [a hazard];

a data link; and

a second data storage system, connected by said data link to said first data storage system;

wherein when said recognition part of said first data storage system provides a warning of a possibility of an event [a hazard], thereupon said storage controller of said first data storage system copies data stored in said memory to said second data storage system over said data link.

whereupon, in each of the above claims each claim is contrasted with the indicated claims of the issued patent 6,684,306 in the following correspondence:

Claim of this patent application	corresponds to	claim of USP 6,684,306
42		1
43		3
44		5
45		6
46		7
47		10
48		12

in such a way such that the difference between the language of the instant claim is shown with the different language of the contrasted already patented claim enclosed in brackets, e.g., [hazard], whereby, in each claim correspondence such difference would have been an obvious variation because the species "[hazard] sensor" anticipates the genus "sensor" and the species "[hazardous] event" anticipates the genus "event", therefore, making the claims of the presently claimed invention obvious over the indicated claims of already patented claims of USP 6,684,306.

Art Unit: 2186

Allowable Subject Matter


8. Claims 25-41 contain allowable subject matter over the prior art of record.
9. Claims 42-48 rejected under obvious-type double patenting basis also contain allowable subject matter over the prior art of record, subject to the filing of a terminal disclaimer to overcome the rejection of record.

Conclusion

10. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.
11. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Stephen Elmore whose telephone number is (703) 308-6256. The examiner can normally be reached on Mon-Fri from 7:30-4:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Matthew Kim can be reached on (703) 305-3821. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Stephen Elmore
Assistant Examiner
Art Unit 2186

May 14, 2004